ABSTRACT OF THE DISCLOSURE

The present invention provides an apparatus and method of multiple antenna transmitter beamforming of high data rate wideband packetized wireless communication signals, where each of the signals comprises N frequencies, where N is a positive integer. The apparatus, in an exemplary embodiment, includes (1) a transmit beamformer that co-phases and weights the signals for each of the N frequencies across M antennas, thereby generating M co-phased and weighted frequency data and (2) M Inverse Fast Fourier Transform units (IFFTs) that convert the M co-phased and weighted frequency data into M digital outputs, and M transmit antennas transmitting the M co-phased and weighted signals, where M is an integer greater than or equal to 2.